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CLEANLINESS AND HEALTH

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The benefits of education and of useful knowledge, generally diffused through a community, are essential to the preservation of a free government.

Sam Houston.

Cultivated mind is the guardian genius of democracy. . . . It is the only dictator that freemen acknowledge and the only security that freemen desire.

Mirabeau B. Lamar.

CLEANLINESS AND HEALTH.

The spell of "Cleanup" is on Texas. Several counties last spring awarded prizes for the cleanest school houses and grounds. Many cities throughout Texas had spring house-cleaning. All about citizens are taking up questions of civic cleanliness and improving sanitary conditions. While this "clean and keep clean" is in the air, let us consider its application to the matter of personal cleanliness. If it is essential that a city keep its waste and dirt properly removed and cared for in order that the health of the community be preserved, is it not equally important that individuals also look after the body cleanliness, and keep the waste and dirt from the skin so that individual health be conserved?

The human body is a living machine running day and night. This machine like all others must have energy to go on. It cannot create this energy but is dependent upon the fuel given it. Food is the fuel of the human machine. Like all fuels, to produce energy it must combine with oxygen, and this process is everywhere accompanied by waste products. In the big furnaces we have ashes, smoke, etc., as waste products. In the human machine we have carbon dioxide gas, water, perspiration and salts, as waste products.

Now, when we examine the structure of the machine, we find that it has many parts and organs, each with its special work to perform. There is the heart to pump the blood to the blood-vessels; the lungs to supply oxygen to the body; the alimentary canal to digest the food or change it so it can be utilized in the body; and the kidneys and skin to remove waste products. If anyone of these sets or parts of organs has its functions impaired, the running of the machine is interfered with and eventually health suffers. This matter of personal cleanliness is extremely important, for it is closely related to the proper functioning of the organs of waste removal.

The skin is often considered a mere protective covering to the body, but in the mechanism of this living machine it has a definite and important work to do. If one coated a rabbit with varnish,

and allowed the varnish to remain on several days, the animal would die. The child who was gilded in order to personify the Golden Age in a street pageant lived but twelve hours. The skin is more than a covering. There is intimate connection between the health of the individual and the function of the skin.

On close examination the skin is seen to contain many small openings called pores, and through these small openings air is admitted to the body and waste products are discharged. Where these processes are interfered with health suffers.

The pores of the skin are connected with the sweat and sebaceous glands located in the second skin layer. Through these pores the glands discharge waste products, provided these pores are kept open.

The sweat glands are extremely numerous and are constantly eliminating perspiration, a fluid mostly water, but with solid waste material dissolved in it. Much of the perspiration dries on the skin without giving the sensation of moisture, but it leaves the waste products to interfere with the pore opening, and if left there long enough to decay and cause disagreeable odors. At times these glands are stimulated to great activity by muscular exercise, nervousness, emotion, or heat, and then the sweat accumulates in large drops. The glands secrete in the adult about one quart of moisture in twenty-four hours, and much larger amounts in hot weather. The greater the discharge from these glands, the greater the necessity of keeping the waste removed and the pores of the skin unclogged.

The sebaceous glands are located throughout the entire skin covering of the body except the palms of the hands and the soles of the feet. These glands pour out an oily fluid intended to keep the skin soft and pliable, but this fluid will also clog the pores if allowed to accumulate.

If the skin becomes coated with dirt, or this waste material discharged by the glands, and the pores are stopped up, we have somewhat the same condition as in the varnished rabbit, or the gilded child. The skin can no longer act as an avenue for air to enter the body cells nor as a medium for removing waste. Its functions are impaired. The waste must be removed. It is true that the body can for a time readjust and send a part of its waste

product to the kidneys, but this is poor economy and disaster soon follows.

The thing to do is to see that the skin is kept in condition for its proper work. This is easily done by bathing or washing off this outer surface. Cleanliness has long been regarded next to godliness, possibly because the bath came Saturday night and Sunday school Sunday morning. But no longer can we keep up this delusion, for the weekly bath should be replaced by the daily bath if we are to keep the pores open to perform their work.

The Englishmen say there are just two classes of men and women; those who bathe daily and those who do not. At the time of the Boer war they were taunted because they carried along folding bathtubs. Is it not possible that they knew the relation of cleanliness to efficiency and they were not willing to risk English supremacy for a lack of bathing facilities?

It is evident that personal cleanliness through frequent bathing is essential. The skin must be kept open to allow the discharge of waste. When this is not done, the elimination of waste is thrown back on the kidneys, they soon become overtaxed, and health suffers. The thorough rubbing which accompanies this frequent bathing keeps the skin active, and thus helps to regulate the temperature of the body and protects the body from cold. The action of the skin controls the amount of blood flowing through the capillaries of the skin. If the body temperature is too low and the surrounding air cold, the capillaries of the skin contract, very little blood flows through them, the sweat glands almost cease their activity and a very small amount of heat is lost from the body by evaporation. The process is reversed when the body temperature is too high—provided the skin is in active condition.

Now, as to the kinds of bath, Harrington in his "Practical Hygiene" gives us the following facts:

"By an arbitrary division of temperature, cold baths are those in which the water has a temperature below 65 F.; cool, between 65 and 80; tepid, between 80 and 90; warm, between 90 and the normal temperature of the body; and hot, above this limit as high as the system can bear. Cold bathing is essentially stimulating; the outer blood vessels contract and send the superficial

blood supply inward; the respiration is momentarily gasping in character, and then slowed and increased in depth. The whole nervous system and all of the mental faculties receive an immediate and powerful stimulus. The pulse is somewhat slowed. On emerging from the cold water, the respiration and pulse return to their normal rates, the outer blood vessels relax and dilate, and the return of the blood in increased volume to the surface gives a sensation of warmth, which is increased by the process of "rubbing down." This is known as the "normal reaction."

The cold bath is taken best in a tub in which the whole body may be immersed; but in default of the necessary means, a sponge, saturated with water, applied repeatedly to the various parts and squeezed out, forms a desirable substitute. A shower bath is better still, especially one admitting of regulation of the temperature.

The proper time for cold bathing is on rising in the morning; never on retiring at night. Cold baths should not be taken by children or those advanced in years, in whom the arteries are hardened, nor by those with abnormal circulation, who do quickly react.

Not in the least in importance of the effects of cold bathing is the immunity which its devotees appear to enjoy against taking cold. Many of those who practice cold bathing the year round seldom or never take cold, and can withstand exposure which, in others, may produce serious illness.

In sea bathing, the element of enjoyment has a most important influence. The salts are commonly supposed to be the chief source of benefit, and, in consequence of this belief, many persons are in the habit of dissolving in their daily bath in the household a quantity of more or less dirty material, sold at a price which insures at least a fair pecuniary return, and known as sea salt. The influence of the salts contained in sea water is *nil*, and the benefits of sea bathing are the result of the physiological action of cold, the attendant exercise of swimming, the pure air, the absence of domestic and business cares (if on vacation), and the sense of enjoyment.

Warm and hot bathing cause dilation of the outer blood vessels of the skin and more or less profuse perspiration. Respiration and pulse are increased in frequency, and a general soothing

effect is produced. Hot bathing is a most grateful means of reducing soreness of the muscles after violent exercise and in some cases a valuable assistant in the treatment of insomnia. For purposes of personal cleanliness, warm and hot baths are more suited than cold, since they can be borne longer with comfort and the relaxation of the skin which they induce is more favorable to complete removal of the adherent matters.

If means for complete bathing are not at hand, the individual should in any event give daily attention to careful cleansing of the "axillae, grons, genitals, and feet, as well as of the hands and face."

One other point to be noted is that no practice is of more value in reducing the ravages of contagious diseases than frequent and conscientious washing of one's hands. For germs are most certainly transmitted from one person to another, and it is accomplished more frequently by the hands than by any other part of the body.

The invitation, therefore, to a guest to wash his hands before dinner is really an invitation for him to disinfect himself or to get rid of the germs which he is carrying, in order that the host and his family may not be infected during the meal. The guest owes it to his host always to accept the invitation, whether he thinks he needs it or not. Doctors and dentists recognize the necessity, and it is surprising to observe how many times during the day a doctor or dentist wash his hands, even though he may not come in contact with any particularly infectious disease. An ordinary man, on the other hand, washes his hands only when he thinks they are dirty, although his daily occupation may expose the skin of his hands to infection many times worse than that which the doctor experiences.

Unfortunately, except in summer, facilities for bathing have not been generally supplied to detached houses in the country. Because plumbing has not been installed in the country home is not an adequate excuse for the lack of bathing facilities. A simple arrangement could be somewhat as follows: Take some small room of the house; fit it with a large galvanized wash tub; run in above the tub the water pipe, or cement a small pump with the well; and arrange if possible some convenience for removal of wash water (a hopper with a pipe running out under

ground could be used, or a pipe merely leading to a ditch, through which the water would run down to the garden or flower beds). For cold weather the room should be fitted with a one-burner kerosene stove for heating the water and room. Such an outfit would cost very little and would add greatly to the comfort, cleanliness and health of the family.

Cost of such a bathroom equipment:

Tub	$1.25
Oil stove, one-burner	4.00
Pump (for pumping water into tub)	1.95

Pipe and drain would be little added expense and could be done by some member of the household.

Should one care for the shower bath, it could be easily arranged for. Where the water is brought into the bathroom through a pipe, the pipe could enter at sufficient height to attach a hose and spray to the end of the faucet. Where there is no direct connection, a shelf could be placed above the tub, a pulley arranged in such a way that the water could be lifted to the shelf and then by means of a spiggot in the vessel containing the water the hose and spray attached. Or the water pipe could enter directly into a pail filled with nail holes at the bottom.

A more satisfactory bathroom arrangement would be to purchase a bathtub of some description. A galvanized tub may be enameled or a white enameled steel bathtub would not be very expensive, but the white porcelain is best of all. The bathtub is better shaped, contains more water, and the waste water can be more easily removed. Reliable firms advertise an entire bathroom outfit of white porcelain enamel consisting of a lavatory, tub, and closet for $38.50. A good white enameled steel bathtub can be obtained for $5.00, and a white porcelain enameled, rolled rim tub for $11.50. There is no reason for farm and rural homes to lack these simple conveniences when they can be obtained at such a moderate cost. For every $10 spent on the farm for improved machinery, the housewife should see that $1 is allowed for improvements in the house.

One family, where no room in the house was available for a bathroom, fitted up a crude shed not far from the house. They

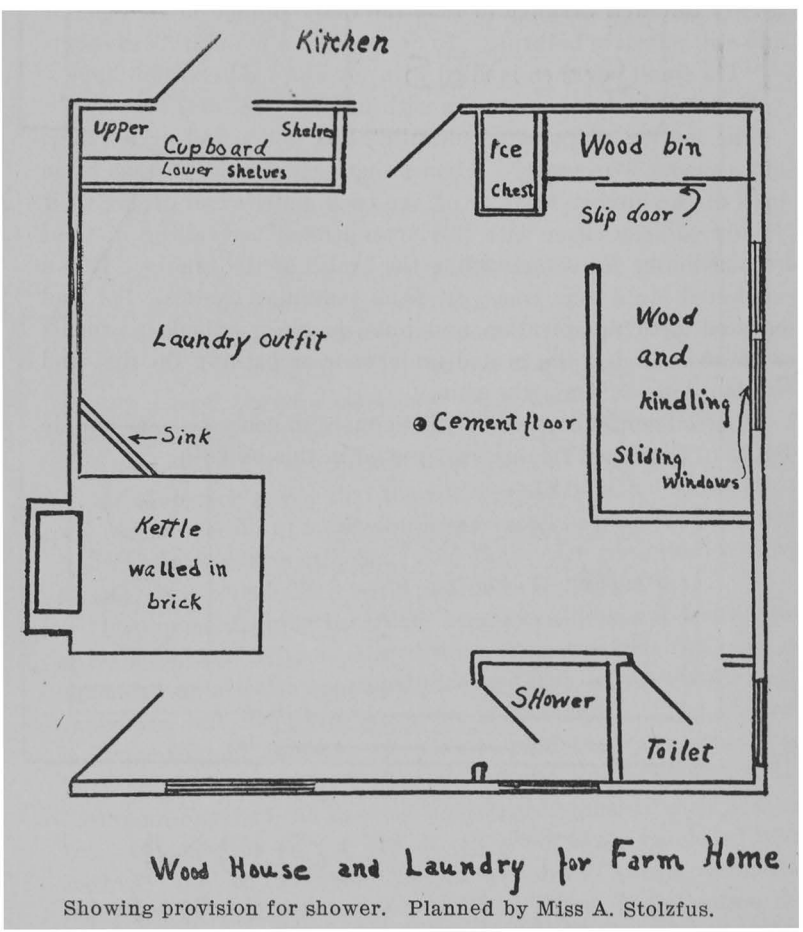
laid a wooden floor, put in a big galvanized washtub, and a little kerosene stove, and piped the water in from the well.

In the summer time where the family is situated near a creek or cool pool of water, the children and even the adults of the family can well arrange to take the daily plunge in this simple and still effective bathtub. To quote from a popular Texas poet:

"The small boy then is filled with joy and wild exultant hope,
For then he bathe in creeks with no use for towels or soap."

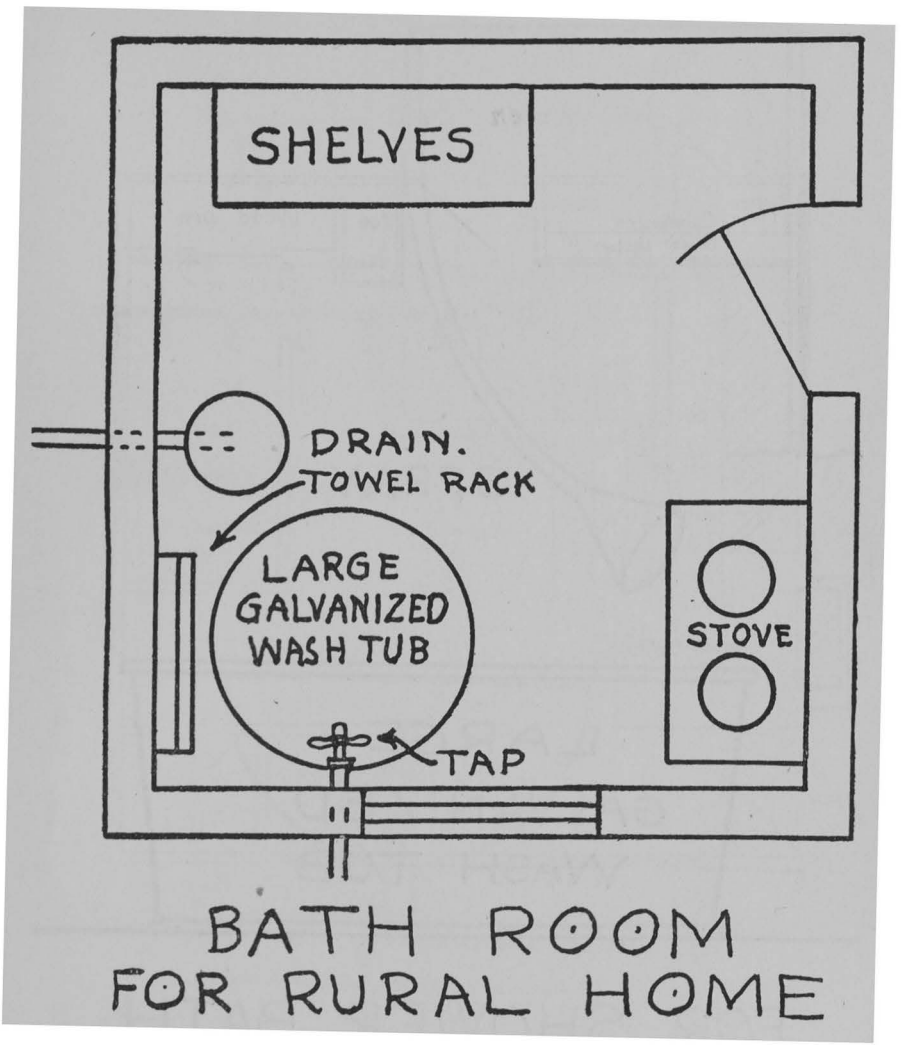
The matter of personal cleanliness is not a fad or a fancy, but a scientific necessity. Homes that only provide a wash basin back of the kitchen stove or on the back gallery and expect their family to keep clean with this arrangement are failing in their responsibility for safeguarding the health of the family. It is a neglected child who comes in from muscular exercise, hot and covered with perspiration and puts on clean outside garments without changing the heated underwear or bathing the dirt and waste products from the skin.

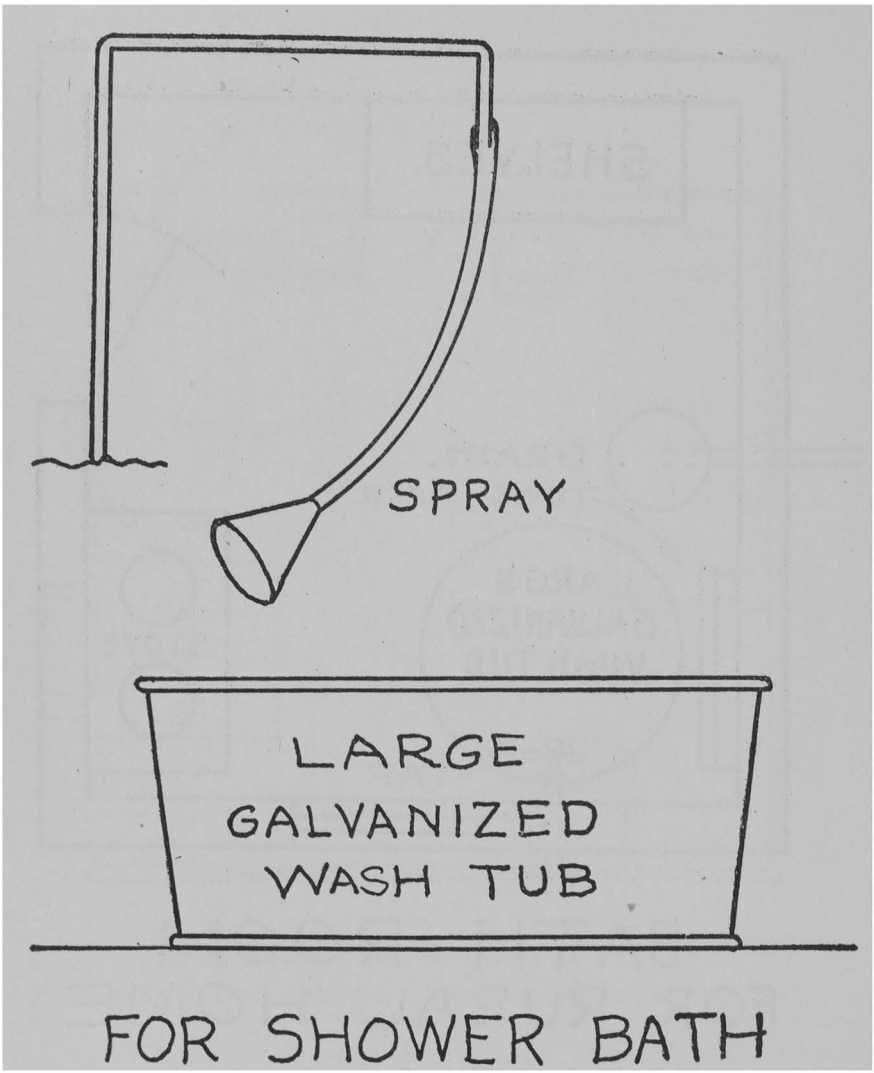
The following plans show a little more in concrete some simple types of bathroom facilities suggested in this bulletin.

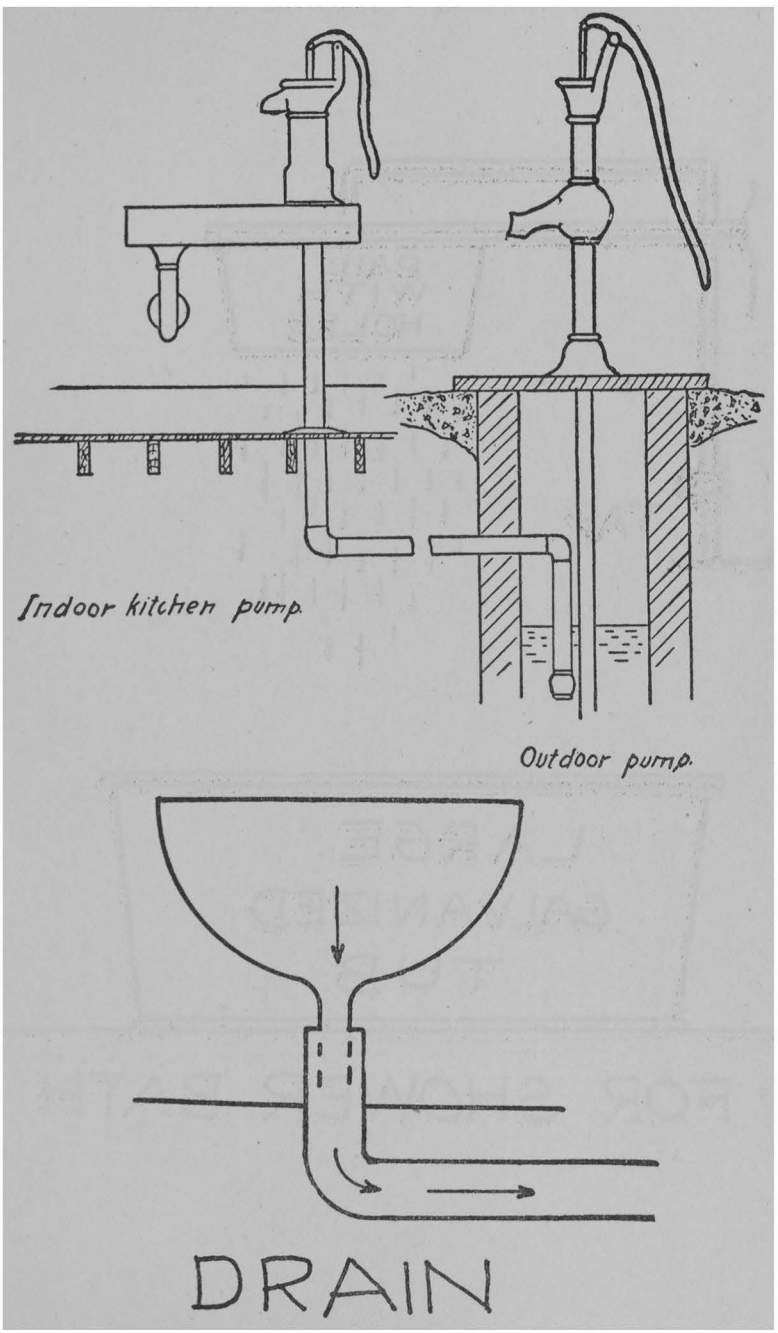


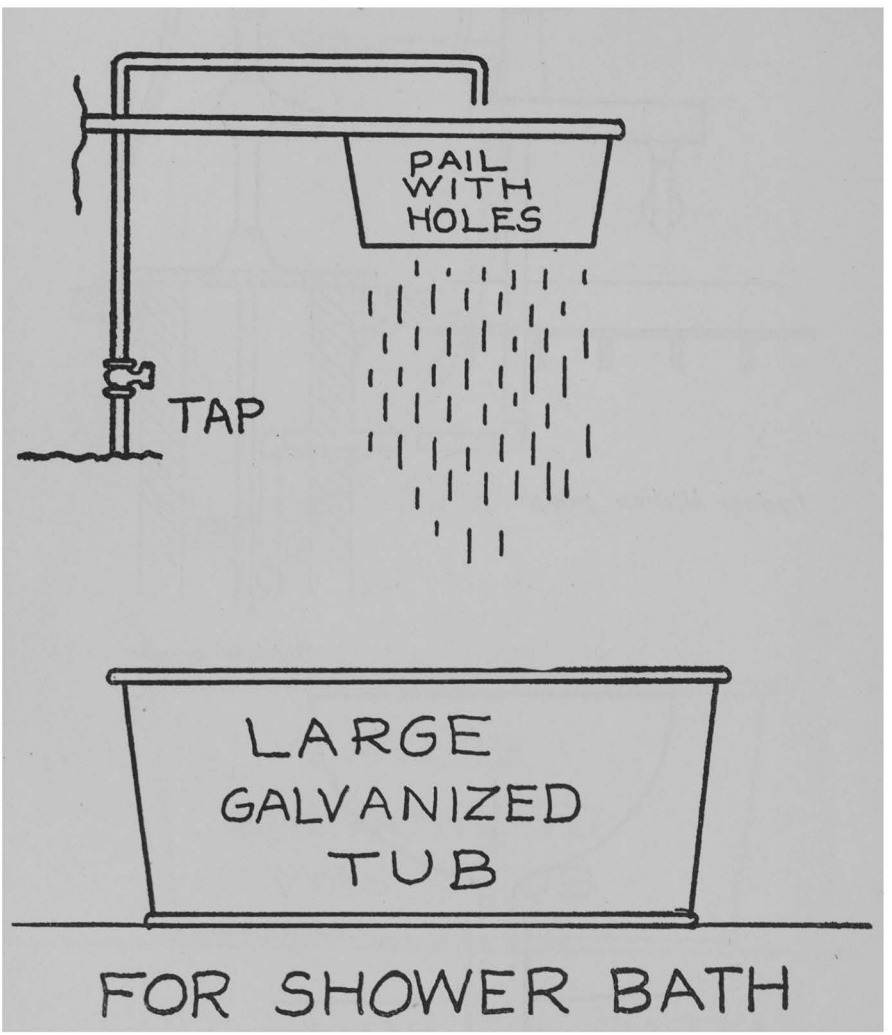
Wood House and Laundry for Farm Home

Showing provision for shower. Planned by Miss A. Stolzfus.


SHELVES
DRAIN.
TOWEL RACK
LARGE
GALVANIZED
WASH TUB
STOVE
TAP
BATH ROOM
FOR RURAL HOME


SPRAY
LARGE
GALVANIZED
WASH TUB
FOR SHOWER BATH


Indoor kitchen pump.
Outdoor pump.
DRAIN


PAIL
WITH
HOLES
TAP
LARGE
GALVANIZED
TUB
FOR SHOWER BATH